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CLAIMS

1. Cooling apparatus comprising a removable cryogenic refrigerator (4) and a thermal interface between the removable cryogenic refrigerator (4) and an article (10) to be cooled 5 by the cryogenic refrigerator, wherein the thermal interface consists of a gas held within a recondensing chamber (12), the recondensing chamber being in thermal contact with a cooling surface (9) of the refrigerator and the article (10) to be cooled.

2. Cooling apparatus according to claim 1 wherein the cryogenic refrigerator is 10 mounted within a sleeve (5), and the volume within the sleeve surrounding the refrigerator forms the recondensing chamber.

3. Cooling apparatus according to any preceding claim, wherein the article (10) to be cooled is placed at a lower extremity of the recondensing chamber, such that gas condenses 15 to a liquid (12) on the cooling surface (9) and falls under gravity into contact with the article (10) to be cooled.

4. Cooling apparatus according to any preceding claim wherein the article (10) to be cooled is in thermal contact with a further recondensing chamber (11), arranged for the 20 recondensation of a cryogen gas itself isolated from the recondensing chamber of the interface.

5. Cooling apparatus according to any preceding claim wherein the cooling surface (9) is provided with fins.

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6. A cryostat containing a liquefied cryogen (16), comprising a recondenser (11a) exposed to the interior of a cryogen vessel (1) containing the liquefied cryogen, the recondenser being connected for cooling by cooling apparatus according to any of claims 1- 5.

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7. An MRI system comprising superconducting windings contained within a cryostat as claimed in claim 6.

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8. A thermal contact, comprising a sealed chamber (5) around a recondensing refrigerator (4) and in contact with a component (10) to be cooled, the sealed chamber being filled with a gas which is recondensed into a liquid (12) by the recondensing refrigerator whereby thermal contact between the recondensing refrigerator and the 5 component (10) is provided by recondensation of the gas.

9. A method for recondensing a cryogen gas within a cryostat comprising the steps of :

- providing a recondensing surface (11a) exposed to the cryogen gas within the cryostat and in thermal contact with a component as recited in claim 8; and

10 - cooling the recondensing surface by cooling the component through a thermal contact according to claim 8.

10. Apparatus substantially as described, and/or as illustrated in Fig. 2 of the accompanying drawing.